unlike the theories of witchcraft, are susceptible to empirical testing, have been severely tested, and have survived, and in so far as medicine has subjected its own independent techniques to severe empirical criticism (for example, in clinical trials) instead of merely looking for "positive instances," we have done everything that can be done to eliminate false theories and ineffective, or even harmful, techniques. This does not mean, of course, that we will thereby always get things right. Quite the contrary: the possibility of our making great new medical discoveries—and thus maintaining the superior intellectual status of medical science—will remain intact only as long as we are on the lookout for its shortcomings and are willing to modify and improve it in the light of consciously sought after failings. As Popper has aptly put it: "In politics and in medicine, he who promises too much is likely to be a quack."[6]

It is in this light that the recent report of the BMA on alternative medicine should be viewed. What is wrong with, say, faith healing is not that it does not have a "scientific basis" if this means that we cannot at present give any scientific explanation of its effectiveness. After all, it is perfectly possible that such practices are regularly effective in, say, curing cancer (just as the old wives' tale that milkmaids did not get smallpox turned out to be true). If this were the case then the fact that we cannot explain it within present medical science would not mean that faith healing is ineffective but rather that our present scientific knowledge is defective. But if the assertion that faith healing does not have any scientific basis means that the claims made on its behalf are incapable of being tested empirically, or have been subjected to such tests and have failed, this is quite a different matter. Of course, the defenders of faith healing may respond to any such negative findings by rejecting altogether the appropriateness of empirical tests for evaluating their claims; but in that case they are asking the rest of us to treat them as oracles, with an unimpeachable hotline to the truth.

If the history of medicine, and indeed of all science, teaches us anything it teaches us that there are no oracles. The history of our knowledge is replete with discarded and long forgotten theories. It follows that present medical science, however testable and well tested it is, is no oracle either. Popper's solution to the problem of demarcation can help us to understand why, despite this fact, we are right to accord greater intellectual status to the theories and practices of modern medical science than we do to those of witchcraft and the witchdoctor.

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How To Do It

Run a clinical budget

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One of the major changes that will take place over the next 10 years or so in the National Health Service concerns the ability to apportion costs directly to clinical work. At present the money available to district health authorities is split up into budgets which fund groups of staff such as doctors, nurses, or porters or which fund purchases of specific items such as medical and surgical supplies, drugs, or heating oil. These budgets are called functional budgets.

With the introduction of new computerised information systems it will soon be possible to relate the various items of patient care, such as laboratory tests and drugs, directly to a patient and also, albeit less accurately, to apportion what amount of time is spent by particular staff groups on the care of that patient. This will allow budgets to be apportioned to clinical activity. These budgets will be called clinical budgets.

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What difference will it make?

The benefits of this are twofold. First, health authority members and staff will be able to see much more clearly how the resources of the health authority are being spent. With the present functional budgeting system it is possible to know what proportion of a hospital's budget goes on a specific purpose—such as providing nursing care, or buying drugs—and also to work out the average cost per hospital day and the average cost of treating a patient in that hospital.

Clinical budgets will show how much is spent on particular types of care, for instance, general surgery or psychiatry. The process will allow health authority members to see whether or not this matches their priorities. It will make the whole process of resource allocation much more open, and also enable financial information to be linked

to the activity carried out by particular health care teams or indeed consultants. Health authority members will soon be able to see what return they get for their money.

The second major benefit envisaged is that clinicians will be involved as the holders of the clinical budgets. The assumption is that as doctors are the major determinants of treatment, and thus the costs of care, if they are given more knowledge of, and responsibility for, these costs, then they will use the money more wisely, effectively, and efficiently.

Who sets the budget?

The budget will usually be set in January or February to enable all budgets to be approved by the health authority before the beginning of the financial year. The budgets are usually agreed at a meeting between members of the finance department, often in conjunction with either the district or unit general manager and the budget holder. During the meeting the previous year's budget will be reviewed and over or under spending discussed. Any changes in activity during the next year, including plans for development, are also discussed and then if possible built into the budgets. In most cases budget holders are asking for additional funds either to meet existing demands that appear to be under funded or to meet new projects that are considered essential or desirable. The meeting may very well end up as a negotiating or bargaining session. It is important at this stage to have your request for extra money properly worked up and costed. It is unlikely that any decision will be made at that particular meeting, as all the other budget holders will also have to be seen and their requests taken into account when the health authority finally decides what can be agreed to within the overall total budget available to it. The better you argue your case, the more likely you are to succeed.

It may also be that potential reductions in the budget will be discussed at this time, with proposals being put to you to reduce or change your budget. You should be prepared to discuss this. The budget meeting is, in effect, a review of the work being carried out by your department or clinical team and is the time in the year to discuss your work directly with management.

What does a clinical budget consist of?

This will depend very much on what local rules have been set out for the budgets and how far advanced the accounting systems are in building up clinical budgets. The developments will probably be incremental, and whereas initially you may have within your budget only a proportion of your activities this will gradually increase. There is likely to be a heading for the capital equipment and consumables that you will be using in the year and this will be one single entry in the budget. There will then be a heading for the staff employed in your department/service and then further headings for other items that you are required to "purchase" to carry out clinical care; these would include pathology, radiology, and possibly paramedical services. You will probably be allocated a notional part of certain facility costs, that is, the hotel services, patient services, and the nursing staff on the wards on which your patients are treated. It will depend very much on what local agreements have been set up as to whether or not they are allocated as a fixed cost or whether you have some control over whether or not you wish to purchase them.

What are the rules for running a budget?

These are contained in the standing financial instructions for the authority and will almost certainly be supplemented by a specific paper on the local procedures for running clinical budgets. This is very much a subject of debate at present with some clinicians suggesting that they should be able to determine both the quality and quantity of paramedical and nursing input; others suggest that this can be determined only by the relevant professions and that they should be merely apportioned to particular patients and to clinical budgets so that clinicians are aware of costs of particular treatment.

Who will help me?

The key person both in helping you prepare for your annual budget meeting and in running your budget over the year is the management accountant. He/she is an accountant working in either the district or the unit finance department who will be available either ad hoc or on a regular basis throughout the year, depending on how you are linked with the finance department. Make friends with him and use him. In particular, at an early stage use him to work with you in preparing next year's programme in advance of the meeting with the treasurer and general manager.

How can I monitor what is happening?

Each month you will have a budget statement which will show your progress. These are usually available three to four weeks after the end of the month to which they refer. They will show under each heading what proportion of your allocation you have actually spent. Under headings relating to staff they will show you how many staff your budget is programmed for and how many staff were actually in post the previous month.

Can I alter how I spend the money?

This is the main reason for having a clinical budget. Most districts have built in incentives whereby if you make savings under a particular budget heading you may keep them either in that year or in future years for alternative use in your department. An example might be the ability to keep and spend on alternative clinical care 100% of savings in one year and 50% for the next three years. You may save money by ordering fewer laboratory tests or altering your saving pattern and use the savings for the purchase of equipment or for going to a conference. This transfer from one budgetary heading to another is called virement. There are usually local rules as to how much virement can take place and to what purposes it can be put. In addition, most rules state that virement can apply only to planned savings. If, for example, your operating theatre was shut down because of Legionnaires' disease you might not necessarily be allowed to use the savings to go to a conference in Honolulu. It all depends on local rules, and the main thing is to make yourself familiar with these rules.

What happens if I overspend?

In the end the only sanction can be to not let you hold a budget in the future. Obviously some over spending may very well be out of your control, and the important thing is to discuss the reasons for this, first with your management accountant and if necessary with the management in the unit.

Why should I do it?

The main reason for participating in this exercise is that you will have some control over your own destiny. You probably cannot alter the actual amount of money that you get to spend on your services but you can very much influence how that money is spent. If you do not then someone else will. There is in effect very little difference between running a clinical budget and running your own bank account—the only difference being that the sums are usually larger and it is someone else's money. It is ultimately good fun.